US 20150126207A1

(19) United States

(12) Patent Application Publication

(10) Pub. No.: US 2015/0126207 A1

(43) Pub. Date: May 7, 2015

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(54) **COEXISTENCE OF LTE OPERATED IN UNLICESNSED BAND**

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(21) Appl. No.: **14/397,488**

(22) PCT Filed: **May 31, 2012**

(86) PCT No.: **PCT/IB2012/052747**

§ 371 (c)(1),
(2), (4) Date: **Jan. 8, 2015**

Publication Classification

(51) **Int. Cl.**
H04W 72/08 (2006.01)

(52) **U.S. Cl.**
CPC ***H04W 72/082*** (2013.01)

(57) **ABSTRACT**

A cellular access node collects information about at least interference in a plurality of channels in unlicensed spectrum, and uses that collected information to update an allocation of the channels among at least two different access points APs. In one embodiment the information is collected from measurement reports received from each AP which indicates whether the various respective channels are available or reserved. Additional measurement reports may be collected from user equipments operating under the APs. In various embodiments the information can include channel recommendations, estimated capacity for the channels, and/or a traffic model for the channels. With this collected information the cellular access node can balance traffic among the APs by its channel allocation decisions. The non-limiting examples assume a radio environment where a LTE cellular access node operates a primary component carrier in licensed spectrum and the cooperating APs operate secondary component carriers in unlicensed spectrum.